



Customer Study:
SBV Services



Executive Overview

Established in 1986 and jointly owned by South Africa's four major commercial banks, SBV is largest cash management service provider in the country.

SBV's objective is to store cash assets at the lowest possible cost, and simultaneously ensure the correct supply of notes in all denominations, across all geographies. This means managing complex factors like:

- Funding trade-offs
- Logistics
- Processing and storage
- Insurance capacity
- Central Bank charges.

"Cash is a very cyclical and complex business," states Carsten Schubert, head of consulting and solutions at SBV Services. With the help of River Logic partner Business Modelling Associates (BMA), SBV has implemented a forecasting and optimization system, intended to create a better planning platform for their industry. The net result is approximately a 33% reduction in total costs.





Issues

If cash is moving particularly slowly, the company will need to introduce new notes into circulation. “What SBV strives to do,” as Schubert explains, “is keep the notes in circulation to a minimum.”

Moving cash from urban economic hubs to rural areas is another problem. “A significant amount of income is generated in the country’s main economic hubs, and then taken back to the rural areas where it is spent. Now that the cash has shifted to rural areas, you end up with a surplus of notes in these locations,” comments Schubert. “SBV then has to move that money from rural areas to the economic hubs. The environment is hugely complex and the costs associated with getting it wrong are very high.”

Solution

SBV's technological motivations are need-driven. "When you get to a point where there is too much complexity for manual processes," as Schubert explains, "you need to look at introducing new technologies to automate processes and simplify things."

The company utilizes a fourth-party logistics provider and cash planning platform developed by BMA, supplemented with the Prophecy Forecasting tool developed by BMA and Automatic Forecasting Systems Inc.

"We typically have a forecast, and the next thing we need to apply is the inventory on a daily basis," Schubert says. "We use the Supply Planning Workbench (SPW) to obtain our inventory position and Prophecy Forecasting to forecast for three months. Then, there are a myriad of scenarios and constraints that we need to factor in with their associated costs."



"At the heart of the planning platform, the SPW uses River Logic's Enterprise Optimizer® (EO) to prescribe movements and balance activity — deposit this cash in that vault; take this cash to that cash center; etc. EO manages all those trade-offs and provides the best recommendations," explains Schubert.

"In my view, forecasting is the predictive side of things; we've got forecasts based on history per denomination, channel and customer. Within that," states Schubert, "we've got to apply certain parameters to try and get each one on the predictive side as accurate as possible. Once we are happy with the forecast, we put it through the SPW, which prescribes to us what we should be doing,"

"Obviously, the more accurate our forecast, the better the input into EO will be," says Schubert. "The interdependency between these two predictive and prescriptive modules is key. If the forecast is very bad, the confidence level in the output of the plan will be equally low."



Implementation

“Incorporating predictive and prescriptive technologies into the business has been a challenging yet rewarding journey,” says Schubert. “On the predictive side, we took actual data going back 18 months from the enterprise resource planning (ERP) system. The data was initially quite difficult to analyze, and came from multiple sources. We then created what we call a ‘sandbox environment,’ in which we can evaluate different forecasting techniques and methods for certain product streams, and apply different parameters until we find the best-fit parameter for the specific denomination, even within a channel or customer.”

“We took our SPW and, starting from scratch at one cash center, began to better understand the cash flow process,” comments Schubert. “From here, we represented product flows, costs, and business/operational constraints in an EO model. We were then able to replicate this across all the other cash centers. Now, we’ve successfully operationalized our plan, and run it through the SPW daily.”



Results

“At a gross level, we’ve changed the operating model with the Central Bank and convinced them of the advanced planning platform’s capabilities. The Central Bank used to be actively involved in the cash supply chain, which required us to deposit notes with them at high cost,” Schubert explains. “As an industry leader, we’ve proved that, with a cash-planning platform in place, we could successfully manage the notes in circulation without increasing them.”

“That process saved effectively ZAR300 million per year, on a spend of about ZAR900 million annually,” concludes Schubert. “If you add in the fact that the Central Bank has dropped some prices and fees, that brings in an additional ZAR70 million to ZAR90 million in annual savings.”